

HEALTH & HUMAN SERVICES. . . . ADVISORY - 2006

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SUBJECT: CARBON MONOXIDE (CO) POISONING WARNING

Every winter Maine experiences widespread power outages due to winter storms. The power outages in the aftermath of the January 1998 Ice Storm resulted in an outbreak of carbon monoxide (CO) poisonings due to improper placement and operation of gas-powered generators and other alternative heating and power sources. A study of this CO poisoning outbreak found that improper placement of a gasoline generator, such as in a basement or garage, could increase the risk of CO poisoning by 20 to 300-fold. Using a kerosene heater in a room without any doors to other rooms opened, or failing to crack a window, also put people at increased risk for CO poisoning. CO is an odorless colorless gas emitted when burning most fuels. Improper operation or placement of alternative heating or power sources can result in poisoning when CO gas builds-up in enclosed spaces.

Alert for Hospital Emergency Departments:

The Department of Human Services, Maine Center for Disease Control & Prevention (ME-CDC, formerly Bureau of Health) is issuing an advisory for Emergency Departments to have heightened awareness for potential carbon monoxide poisoning should widespread power outages occur. Carbon monoxide poisoning shares many of the same symptoms of the flu, but without the fever. In a study of an outbreak of CO poisoning in Maine, the most common presenting symptoms were headache (69% of cases), nausea (51%), dizziness (48%), fatigue (31%), vomiting (21%), chestpain (9%), shortness of breath (6%), and loss of consciousness (8%). These symptoms were associated with blood carboxyhemoglobin (COHb) levels ranging from 2 % to 50 %, with a median of 14 %. Some individuals with elevated COHb levels were asymptomatic, and were identified because another household member had symptoms. Background COHb levels in nonsmokers is typically under 2% and for smokers is under 9%. Reference: Daley et al., An Outbreak of Carbon Monoxide Poisoning After a Major Ice Storm in Maine, *J. Emerg. Med.*, Vol. 18 (1):87-93, 2000.

Recommendations To Avoid CO Poisoning During Power Outages:

- ✓ **Place generators outdoors** in a well ventilated location • Generators should be placed well away from home windows or doors • Generators should not be placed in an enclosed or semi-enclosed space (such as basement, cellar bulkhead, attached garage) where carbon monoxide can build up to dangerous levels.
- ✓ **Use kerosene heaters in a well ventilated room**, by either keeping doors to other rooms open or keeping a window partially open (at least 1 inch) • Use only K-1 grade fuel in kerosene heaters • Follow instructions for setting the wick height.
- ✓ **Do not use outdoor cooking devices indoors** (such as gas or charcoal grills, gas camp stoves).
- ✓ **Do not use indoor gas cooking stoves for heat.**
- ✓ **Keep chimney flue and a window open when burning decorative gas fireplace logs as a heat source.**
- ✓ **Keep a carbon monoxide monitor certified by the Underwriters Laboratory**, and available in many hardware stores. If battery powered, replace batteries at least annually.

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